

## ABSTRACT OF THE DISCLOSURE

A control device of LEDs includes a lighting-up circuit and a lighting-out circuit, both of which generate pulse signals being pulse-width modulated by varying cycles and corresponding  
5 duty ratios based on an input signal during a start-up period and a falling period, respectively. The control device then provides LEDs with the electric current relative to the pulse signals. Both of the lighting-up circuit and lighting-out  
10 circuit vary the cycles and corresponding duty ratios of the pulse signals, so that a luminance variation characteristic of the LEDs becomes nonlinear, leading to being approximated to a luminance variation characteristic of an electric bulb.